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ABSTRACT

The Child Development Rating Scales (CDRS) is a parent-administered adaptive behavior assessment instrument for use with children whose developmental age is birth through 5 years and whose chronological age is birth through 8 years. The scale was developed in order to conduct research on parents' abilities to assess a wide range of skills in their handicapped children and on the effects of parents' levels of empowerment, resulting from utilizing the CDRS as part of their children's assessment regimens. The CDRS is comprised of items from both the Wisconsin Behavior Rating Scales and the Vineland Adaptive Behavior Scales and yields an overall age score, as well as age scores in each of four subscales: communication, daily living skills, socialization, and movement. Two studies were conducted to assess the reliability and validity of the CDRS, with a combined N of 49. Results suggest that the CDRS yields reliable and valid results. (Author)

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Psychometric Characteristics of the Child Development Rating Scales

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Abstract

The Child Development Rating Scales (CDRS) is a parent-administered adaptive behavior assessment instrument for use with children developmentally birth through five years of age. The scale was developed in order to conduct research on parents' abilities to assess a wide range of skills in their children with handicaps, aged birth through eight years, and on the effects on parents' levels of empoverment, resulting from utilizing the CDRS as part of their children's assessment regimens. The CDRS is comprised of items from both the Wisconsin Behavior Rating Scales and the Vineland Adaptive Behavior Scales, and yields an overall age score, as well as age scores in each of four subscales: Communication, Daily Living Skills, Socialization, and Movement. Two studies were conducted to assess the reliability and validity of the CDRS, with a combined N of 49. Results suggest that the CDRS yields reliable and valid results. Suggestions are made for further studies.

Psychometric Characteristics of the Child Development Rating Scale

The Child Development Rating Scales (CDRS) (Weeldreyer, Dunst, Snyder, Chase, Cooper, & Carswell, 1986) is an adaptive behavior scale for children aged birth through five years developmentally. It was developed as a research instrument to assess parents' abilities to assess their children's development, and most importantly, to assess the effects completing such an instrument during their children's assessment regimens has on parents' sense of empoverment. Specifically, the CDRS is designed to: (1) be completed by parents, (2) consist of items which would be perceived by parents and professionals as reflecting functional skills, (3) include a wide range of items throughout a birth through five year age range, and (4) yield a developmental age score and subscale scores which are both reliable and valid. In addition to these purposes, the CDRS is intended to enable parents to develop a greater understanding of, and involvement in the assessment of their child, increase their feelings of competence in determining intervention goals for their child, and, most importantly, to make it more likely that the assessment process itself would be an empowering one for parents.

The CDRS was developed by staff of Project HAPPEN (Helping Agencies Promote Parent Empoverment through Networking), at the Family, Infant and Preschool Program (FIPP) in Morganton, NC.

The CDRS consists of a total of 286 items divided in four subscales: Communication, Daily Living Skills, Socialization, and Movement. It takes approximately 15 minutes to be completed. Most of the items were adapted from items in the Wisconsin Behavior Rating Scales (Song & Jones, 1980), and the Vineland Adaptive Behavior Scales (Sparrow, Balla & Cicchetti, 1984).

In this paper we present the results of two studies conducted to investigate the utility of the CDRS for achieving the goals described above. In the first study, we sought to determine the degree to which the CDRS yields reliable and valid developmental age levels when completed by both parents and trained interviewers. In the second study we determined the correlation between the CDRS, when administered by parents, and a standardized adaptive behavior instrument administered by a professional as part of a trans-disciplinary assessment process.

Study One

Method

Subjects

The subjects were 11 mothers of children with a variety of special needs, five of whom were enrolled in FIPP and six of whom were enrolled in an early intervention program in a neighboring county. The children (five girls and six boys) ranged in age from 16 months to 86 months, and had differing handicapping conditions, including cerebral palsy, Down Syndrome, and mental retardation due to unknown causes.

Procedures

Each parent participated in two test administration sessions approximately two to four weeks apart, which were conducted by psychology students from a nearby college. The students were trained to administer the CDRS based on a structured interview similar to that used in administering the Vineland Adaptive Behavior Scales. Students were also trained in giving parents directions for self-administration of the CDRS, including instructions for obtaining a basal and ceiling level in each of the four subscales. Students were also trained to administer the Scales of Independent Behavior (SIB) (Bruininks, Woodcock, Weatherman & Hill, 1984), an adaptive behavior scale which was used as the criterion measure of adaptive behavior.

The first session consisted of three conditions: a student-conducted interview (PREASK), a parent-administration of the CDRS (PREMOM), and administration of the SIB (CONTROL). The SIB was always administered last, but the order of the two administrations of the CDRS was counter-balanced to avoid any effects due to the order of administration.

In the second session, the CDRS was administered once by interview (POSTASK) and once by parent administration (POSTMOM). Each parent participated in these two conditions in the reverse order in which she participated in the first session.

Nine of the 11 subjects completed all conditions. Two completed only the PREASK, PREMOM, and CONTROL conditions, and were not able to complete the POSTASK or POSTMOM conditions because of scheduling conflicts.

Results

Scores on the CDRS ranged from 1 to 53 months with means on the four conditions ranging from 24.64 months (SD = 15.58) to 27.83 months (SD = 18.07). The mean score for the CONTROL condition was 23.78 (SD = 16.92). A repeated measures ANOVA was utilized to ascertain the presence of any interaction effects. There were no significant findings based on the repeated measures ANOVA, which analyzed the data utilizing the four CDRS test-conditions as the dependent measures grouped by the child's status in FIPP (i.e. FIPP vs. non-FIPP). Correlation coefficients between scores were computed using rank-order analysis. Kendall's Rank-Order Correlation Coefficient formula was used to determine the relationship between the various conditions. All results are shown in Table 1.

The correlation between the PREMOM and PREASK conditions and the POSTMOM and POSTASK are indicators of reliability between the CDRS when self-administered by the parent and when administered via a structured interview. The correlations obtained were 0.89 ($p<.01$) and 0.83 ($p<.01$), respectively.

The relationships between the PREMOM and POSTMOM conditions and PREASK and POSTASK conditions were used as indicators of test-result reliability. The correlations obtained were 0.89 ($p<.01$) and 0.83 ($p<.01$).

The relationships between the CONTROL and the other four conditions were used as indicators of concurrent validity. The correlation coefficients ranged from 0.82 ($p<.01$) (POSTASK/CONTROL) to 0.99 ($p<.01$) (PREMOM/CONTROL).

Insert Table 1 about here

Study Two

Method

Subjects

The subjects were 38 mothers of children with a variety of special needs, all of whom were enrolled in FIPP. The children (20 boys and 17 girls) ranged in age from 7 months to 66 months, and had a wide variety of handicapping conditions, including Down Syndrome, cerebral palsy, language delay, spina bifida, high risk due to prematurity, and mental retardation due to unknown causes.

Procedures

Each mother was asked by her case coordinator to complete the CDRS no more than four weeks prior to her child's assessment at FIPP. It was explained that the CDRS was designed to give parents a way to review their child's development so they can think about strengths and needs and use this information for planning. The parents were also informed that the CDRS was still being researched so it was not known whether scores obtained would be valid. Each case coordinator explained how to obtain a basal and a ceiling and gave each mother an opportunity to ask questions about completing the scale, but did not offer guidance in actually rating any of the items. The mothers completed the CDRS independently once instructions were given and returned them to case coordinators on subsequent home visits, prior to the child's assessment day at FIPP.

During the assessment day each child participated in a variety of assessment procedures ranging from informal play sessions to formal standardized tests, depending on the needs of the child and family. As part of this assessment regimen all parents participated in a structured interview with a FIPP psychologist regarding the child's day-to-day behavior and a standardized adaptive behavior instrument was scored based on the information shared during the interview. Three different instruments were used depending on the age of the child and the FIPP team to which the child was assigned: the Scales of Independent Behavior (Bruininks et al, 1984) the Vineland Adaptive Behavior Scales (Sparrow et al, 1984) and the Wisconsin Behavior Rating Scales (Song & Jones, 1980). The psychologist completing the scale had no prior knowledge of the parents' rating of her child on the CDRS.

Results

Scores on the CDRS ranged from 1 to 45 months with a mean of 18 months (SD = 13.22). Scores on the interview-based instruments ranged from 2 months to 48 months, with a mean of 18 months (SD = 12.59). The correlation coefficient between the two groups of scores using Kendall's Rank-Order Correlation Coefficient formula was .83.

Discussion

The results of both studies suggest that the CDRS provides reliable and valid developmental age levels. The results must be viewed with some caution, however, due to the relatively small sample sizes. Additionally, this study included only subjects with handicapping conditions, whose primary caregivers had participated in early intervention programs, and who lived in a limited

geographic area. Consequently, results may not be generalizable to non-handicapped children, to children in different geographical areas, or to children who have not been involved in early intervention programs.

Nevertheless results indicate that the CDRS yields reasonably reliable and valid results to be used for future research regarding its impact on parents' empoverment, especially since it will be used in conjunction with other assessment instruments and procedures. While additional studies of the psychometric properties of the CDRS are planned, the outcomes of studies to determine if other goals of the CDRS are being met will be of much greater significance. One such study is already underway, designed to assess the impact of utilizing the CDRS on parent involvement in intervention planning for their children and making the assessment process an empovering one for parents (Mott & Weeldreyer, in work).

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Table 1. Kendall Rank-Order Correlation Coefficients Between the Control and CDRS Conditions

	PREASK	PREMOM	POSTASK	POSTMOM	CONTROL
PREASK	1.0000				
PREMOM	0.8889 *	1.0000			
POSTASK	0.8333 *	0.8333 *	1.0000		
POSTMOM	0.8889 *	0.8889 *	0.8333 *	1.0000 *	
CONTROL	0.8733 *	0.9860 *	0.8170 *	0.8733 *	1.000

Note: PREASK = first interview condition, PREMOM = first self-administered condition, POSTASK = second interveiw condition, PREMOM = second self-administered condition.

* = $p<.01$